

TECHNICAL REVIEW DOCUMENT
For
RENEWAL of OPERATING PERMIT 95OPKC052

Tri-State Generation and Transmission Association, Inc. – Burlington Station
Kit Carson County
Source ID 0630003

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April-August 2009

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewal operating permit proposed for this site. The original Operating Permit was issued May 30, 1997, and was renewed on June 1, 2002. The renewed permit expired on June 1, 2007. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted May 24, 2006, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

This facility generates electricity primarily to service peak electrical load demands and is classified under the Standard Industrial Classification 4911. The significant emission units consist of two General Electric simple cycle combustion turbines and generators, each capable of generating 52 megawatts of electricity under nominal (average temperature) conditions. The turbines are fueled with No. 2 distillate blend oil and the fuel is stored in two identical tanks each capable of holding 2.8 million gallons. Based on the information available to the Division and provided by the applicant, it appears that no modifications to these significant emission units has occurred since the original issuance of the operating permit. In addition, the list of insignificant activities has not changed since the original permit issuance.

Note that none of the emission units are equipped with control devices and therefore the Compliance Assurance Monitoring (CAM) requirements to not apply to any of the emission units at this facility.

The facility is located approximately 4 miles northeast of Burlington in Kit Carson County. This facility is located in an area that has been designated as attainment for all criteria pollutants. There are no federal class I designated areas within 100 km. Kansas and Nebraska are located within 50 miles of the facility and are therefore affected states.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to update actual emissions. The potential to emit (PTE) was recalculated in the TRD for the first renewal taking into account any regulatory emission limits, such as the Reg 1 PM and SO₂ emission limitations. The only change to these PTE calculations was for hazardous air pollutants, which were recalculated based on the current AP42 emission factors for turbines (AP42 section 3.1). The PTE calculations for HAPs show that this is a minor source of HAP emissions with no individual HAP over ten tons per year and total HAPs less than 25 tons per year. Emissions (in tons per year) at the facility are as follows:

Pollutant	Potential to Emit	Actual Emissions ³
PM ¹	510	0.45
PM ₁₀	510	0.45
SO ₂ ²	4,080	5.6
NO _x	4,488	35.0
CO	16.8	0.14
VOC	2.1	0.005
Hazardous Pollutants	6.3 total	Less than reportable levels

¹ PTE is based on 0.10 lbs/MMBtu x design heat rate x 8760 hrs/yr, for each turbine.

² PTE is based on 0.8 lbs/MMBtu x design heat rate x 8760 hrs/yr, for each turbine.

³ Actual emissions are based on emission factors developed by EPA and found on the WEBFIRE website.

Potential to emit for the turbines is based on the information identified in the table and the maximum hourly fuel consumption rate, AP-42 emission factors and 8760 hrs/yr of operation. Note that potential to emit for the tanks is minimal compared to emissions from the turbines. Therefore, the potential to emit from the tanks is not included in the above table. Actual emissions are based on the Division's 2007 inventory. These turbines operate at approximately 1% or less of their full capacity. It should be noted that there is a MACT standard (YYYY) for stationary combustion turbines, but this standard is only applicable to new and reconstructed turbines. The Burlington turbines have not been reconstructed so the standard is not applicable.

III. Discussion of Modifications Made

Source Requested Modifications

The source requested one change to the permit in an email dated May 10, 2007. This request was to reduce the frequency of startup opacity readings to once per year instead of twice. Tri-State notes that the turbines have complied with the startup opacity limits since the operating permit was first issued and sometimes the turbines have to be started solely to make an opacity reading. Based on this rationale the Division will make the startup opacity readings an annual requirement, instead of semi-annual.

Other Modifications

Although the source did not request any changes to their permit in their renewal application, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the Burlington Renewal Operating Permit. These changes are as follows:

- Added the parts washer to the list of specific non-applicable requirements to note that it is not subject to Part 63 Subpart T, since hazardous compounds are NOT used.
- General wording was revised throughout the permit to match the current Division wording used in Title 5 permits.

- Tri-State contacts have been changed, as have addresses of EPA offices.
- Condition 1.2 was revised to note that the regulatory citation is Regulation 1, Section VI.A.3.c.(ii), not Section VI.A.3.b.(ii). Section c.(ii) is specific to combustion turbines, however the standard is the same as b.(ii).

IV. Miscellaneous

The EPA has proposed a new a new MACT provision for reciprocating internal combustion engines in Subpart ZZZZ, which would apply to engines as small as 50 HP. Tri-State has stated that their emergency engine is 30 HP so if the rule is finalized as is, the engine will not be subject because the proposal is for 50HP and larger. The insignificant activity list has been revised to note the size of this engine.